

REMARKS/ARGUMENTS

Status of the Claims

Upon entry of the present amendment, claims 1-7 and 24-47 are pending. Claims 1-3, 24-27, 31 and 44 are amended. New claims 45-47 are added. Claims 8-23 are canceled without disclaimer or prejudice to renewal. Claims 1-7 and 28-44 are withdrawn as directed to non-elected inventions, to be rejoined and considered upon indication of allowable material in claims 24-27.

Claims 24-27 are amended to set forth that the polypeptide has at least 90% amino acid sequence identity to the full length of SEQ ID NO:16. Support is found for example, on page 9, lines 1-11; and on page 17, line 27 through page 18, line 6.

Claims 1, 31 and 44 are amended to be commensurate in scope with claims 24-27, should they be rejoined.

New claims 45-47 find support, for example, on page 9, lines 1-11; and on page 17, line 27 through page 18, line 6.

Rejoinder

Applicants acknowledge that claims 1-7 and 28-44 are presently withdrawn from examination. The Examiner is thanked for reminding Applicants, that upon a determination of allowable subject matter of the product claims, the process claims will be entered as a matter of right if the process claims depend from or otherwise include all of the limitations of the patentable product. Therefore, pursuant to M.P.E.P. § 821.04, Applicants have amended claims 1, 31 and 44 to be commensurate in scope with claims 24-27.

Specification

The Examiner has objected to the specification for containing an embedded hyperlink on page 19, line 17. In response, Applicants have amended the paragraph on page 19 to remove the embedded hyperlink.

Claim Objections

The Examiner has objected to claims 24-27 for reciting non-elected inventions. Applicants do not agree with the Examiner. Applicants made a species election, and would be entitled to examination of additional species upon an indication of allowability of the first examined species. However, solely in the interest of furthering prosecution, and not out of acquiescence to the Examiner, Applicants have amended the claims to delete reference to SEQ ID NOs:18 and 20.

The Examiner has also objected to claims 24-27 for a missing transitional phrase. In response, Applicants have amended claim 24 to set forth the suggested transitional phrase.

Rejections under 35 U.S.C. § 102

U.S. Patent No. 6,962,806

The Examiner has rejected claims 24-25 and 27 under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,962,806 (to Taylor and Wang) ("the '806 patent"). To the extent that this rejection applies to the amended claims, this rejection is respectfully traversed.

Proper anticipation requires that the cited reference teach each and every element of the rejected claim, either expressly or inherently. M.P.E.P. § 2131.

Here, the '806 patent discloses fucosyltransferase amino acid sequences from *Helicobacter pylori* strains NCTC11639, UA1182 and UA802. It appears that the Examiner is making this rejection in view of SEQ ID NO:18 from the present application, a fucosyltransferase from *H. pylori* strain UA802, which is no longer set forth in the claims. The fucosyltransferase amino acid sequences disclosed in the '806 patent share less than 90% amino acid sequence identity with the full length of SEQ ID NO:16 of the present application. The sequence alignments provided by the Examiner are consistent with this conclusion.

Therefore, the '806 patent does not disclose or suggest an isolated polypeptide having at least 90% amino acid sequence identity to the full-length of SEQ ID NO:16 of the present application (*H. pylori* strain UA 1111). The '806 patent further does not disclose or

suggest an isolated polypeptide having at least 95% amino acid sequence identity to a region of at least 100 continuous amino acids of an amino acid sequence of SEQ ID NO:16.

Accordingly, because the '806 patent does not anticipate the claimed polypeptides, the Examiner is respectfully requested to withdraw this rejection.

U.S. Application No. 10/120,319 (Published as 2002/0164749)

The Examiner has rejected claims 24 and 27 under 35 U.S.C. § 102(b or e) as allegedly anticipated by U.S. Patent Publication No. 2002/0164749 (to Taylor and Wang) ("the '749 publication"). To the extent that this rejection applies to the amended claims, this rejection is respectfully traversed.

Here, the '749 publication has the same specification as the '806 patent, discussed above. The '806 patent is a divisional of 10/120,319. Like the '806 patent, the '749 publication does not disclose or suggest an isolated polypeptide having at least 90% amino acid sequence identity to the full-length of SEQ ID NO:16. The '749 publication further does not disclose or suggest an isolated polypeptide having at least 95% amino acid sequence identity to a region of at least 100 continuous amino acids of an amino acid sequence of SEQ ID NO:16.

Accordingly, because the '749 publication does not anticipate the claimed polypeptides, the Examiner is respectfully requested to withdraw this rejection.

Wang, *et al.*, *Molecular Microbiology* (2000) 36:1187

The Examiner has rejected claims 24 and 27 under 35 U.S.C. § 102(b) as allegedly anticipated by Wang, *et al.*, *Molecular Microbiology* (2000) 36:1187-1196 ("Wang"). To the extent that this rejection applies to the amended claims, this rejection is respectfully traversed.

As the Examiner appreciates, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherence of that result or characteristic. M.P.E.P. § 2112(IV), *citing In re Rijckaert*, 9. F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (emphasis in original). Where the claimed invention is not expressly disclosed in the cited reference, the Examiner must provide a basis in fact and/or

technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *See*, M.P.E.P. § 2112(IV), *citing Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Here, Wang does not disclose or suggest an isolated polypeptide having at least 90% amino acid sequence identity to the full-length of SEQ ID NO:16. Wang further does not disclose or suggest an isolated polypeptide having at least 95% amino acid sequence identity to a region of at least 100 continuous amino acids of an amino acid sequence of SEQ ID NO:16.

Instead, Wang discloses the nucleic acid sequences of the hypervariable regions of different fucosyltransferase genes (*see*, Wang at page 1191, Figure 3). Wang does not disclose or suggest any amino acid sequences, much less an amino acid sequence 100 or 200 amino acids in length or the full length of SEQ ID NO:16. The polypeptides of the present invention are also isolated (*i.e.*, substantially purified). References on pages 1188, 1192 and 1193 of Wang to the *Helicobacter* UA1111 strain point to unpublished data. Nothing in the review of Wang necessarily discloses or suggests a polypeptide of at least 90% sequence identity to the full-length of SEQ ID NO:16 or that the polypeptides from UA1111 were isolated.

Accordingly, because Wang does not inherently anticipate the claimed polypeptides, the Examiner is respectfully requested to withdraw this rejection.

Rasko, et al., J Biol Chem (2000) 275:4988

The Examiner has rejected claims 24-25 and 27 under 35 U.S.C. § 102(b) as allegedly anticipated by Rasko, et al., *J Biol Chem* (2000) 4988-4994 ("Rasko"). To the extent that this rejection applies to the amended claims, this rejection is respectfully traversed.

Here, Rasko discloses fucosyltransferase amino acid sequences from the *H. pylori* strain UA948. Rasko does not disclose or suggest an isolated polypeptide having at least 90% amino acid sequence identity to the full-length of SEQ ID NO:16 of the present application (*H. pylori* strain UA 1111). Rasko further does not disclose or suggest an isolated polypeptide having at least 95% amino acid sequence identity to a region of at least 100 continuous amino acids of an amino acid sequence of SEQ ID NO:16.

Accordingly, because Rasko does not anticipate the claimed polypeptides, the Examiner is respectfully requested to withdraw this rejection.

Obviousness-Type Double Patenting Rejections

U.S. Patent No. 6,962,806

The Examiner has rejected claims 24-25 and 27 under the judicially-created doctrine of obviousness-type double patenting as allegedly obvious over claims 1-11 of the '806 patent. To the extent that this rejection applies to the amended claims, this rejection is respectfully traversed.

Claims 1-11 of the '806 patent are directed to substantially purified polypeptides as set forth in SEQ ID NOs:1, 2, 3 and 7 of the '806 patent. As discussed above, SEQ ID NOs: 1, 2, 3 and 7 of the '806 patent share less than 90% amino acid sequence identity with the full length of SEQ ID NO:16 of the present application.

Accordingly, because claims 1-11 of the '806 patent do not anticipate or render obvious the claimed polypeptides, the Examiner is respectfully requested to withdraw this rejection.

U.S. Application No. 09/733,524 (Published as 2002/0068347; issued as U.S. Patent No. 6,534,298)

The Examiner has rejected claims 24 and 27 under the judicially-created doctrine of obviousness-type double patenting as allegedly obvious over claims 1, 2 and 9 of U.S. Patent Publication 2002/0068347, now issued as U.S. Patent No. 6,534,298 ("the '298 patent").

This rejection is respectfully traversed. The claims of the '298 patent are directed **polynucleotides** encoding fucosyltransferases and methods of producing fucosyltransferase polypeptides by expressing the polynucleotides, subject matter analogous to what has been withdrawn from consideration in the present application.

Because the claims of the '298 patent do not render the presently claimed polypeptides obvious, the Examiner is respectfully requested to withdraw this rejection.

U.S. Application No. 10/120,319 (Published as 2002/0164749)

The Examiner has provisionally rejected claims 24 and 27 under the judicially-created doctrine of obviousness-type double patenting as allegedly obvious over claims 1, 2 and 9 of U.S. Patent Publication 2002/0164749.

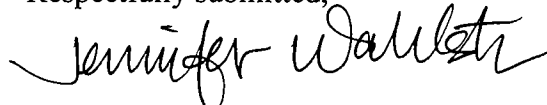
This is a provisional rejection. Applicants defer responding to this rejection until there is an indication of allowable subject matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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Attachments
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